



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/381,243	01/21/2000	CHARLES R. HASKINS	064385-5030	3704

9629 7590 07/09/2009
MORGAN LEWIS & BOCKIUS LLP
1111 PENNSYLVANIA AVENUE NW
WASHINGTON, DC 20004

EXAMINER

SUBRAMANIAN, NARAYANSWAMY

ART UNIT	PAPER NUMBER
----------	--------------

3695

MAIL DATE	DELIVERY MODE
-----------	---------------

07/09/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Art Unit: 3695

DETAILED ACTION

1. This office action is in response to applicant's communication of May 26, 2009.

Amendments to claim 9 have been entered. Claims 9-11, 13-20, 22-23, 45, 46 are pending and have been examined. The rejections and response to arguments are stated below. Applicants are requested to note the Examiner's new art unit number (**AU 3695**) in their reply to their future correspondence.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 9-11, 13-20, 22-23, 45, 46 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 9 recites in the preamble "A computer-implemented method for projecting an accumulated investment amount for a portfolio". However it is not clear which steps of the method, other the last two steps, are implemented by the computer. Absent this clarity, the Examiner interprets the other steps to be performed by a human also.

Claim 9 recites the limitations "generating a projection random number starting point for an initial year in the preselected time period", and "completing a projection method parameters file in which various parameters are identified". It is not clear how these two steps are related. Is the step of completing a projection method parameters file based on the step of generating a projection random number starting point for an initial year or are these two steps independent of each other. It is also not clear how the steps of "completing a projection method parameters file"

Art Unit: 3695

is related to the step of “generating a random number starting point for a subsequent year”.

Similarly it is not clear how the last two steps of the method are related to each other and to the other steps of the method. This claim also recites the limitation “completing a projection method parameters file in which various parameters are identified” (emphasis added). It is not clear what the Applicants mean by “various parameters”. These are parameters of what object? The metes and bounds of this limitation are unclear. Appropriate correction is required. Dependent claims are rejected by way of dependency on a rejected independent claim.

Dependent claims also contain steps that further limit the method of claim 9. However it is not clear after which step of claim 9 these steps are performed. The relationship between the steps of the dependent claim and independent claim is not clear. For instance in claim 15, it is not clear how the steps of inputting the average yield for each of the plurality of funds; automatically deducting a service charge; and automatically calculating the average projected yield for each of the plurality of funds are related to the steps of the independent claim. The average yield for each of the plurality of funds is already in the projection method parameters file. So it is not clear as to at what step is the average yield is input. Similarly it is not clear how automatically deducting a service charge is related to the steps of inputting the average yield and automatically calculating the average projected yield for each of the plurality of funds. Applicants are requested to correct such ambiguities in other claims in their reply to this office action.

The rejections given below are interpreted in light of the 112, second paragraph rejections above.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Art Unit: 3695

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claim 9-11, 13-20, 22-23, 45 and 46 are rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory Subject matter.

35 USC 101 requires that in order to be patentable the invention must be a **“new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof”** (emphasis added).

The claimed invention does not fall in the process category for the following reason. The Supreme Court has recognized only two instances in which such a method may qualify as a section 101 process: when the process ‘either [1] was tied to a particular apparatus or [2] operated to change materials to a ‘different state or thing.’’ In *Diehr*, the Supreme Court confirmed that a process claim reciting an algorithm could state statutory subject matter if it: (1) is tied to a machine or (2) creates or involves a composition of matter or manufacture.¹² 450 U.S. at 184. There, in the context of a process claim for curing rubber that recited an algorithm, the Court concluded that “[t]ransformation and reduction of an article ‘to a different state or thing’ is the clue to the patentability of a process claim that does not include particular machines.”

In *Comiskey (In re Comiskey)* “the mere use of the machine to collect data necessary for application of the mental process may not make the claim patentable subject matter.” *Comiskey*, 499 F.3d at 1380 (citing *In re Grams*, 888 F.2d 835, 839-40 (Fed. Cir. 1989)). In other words, nominal or token recitations of structure in a method claim should not convert an otherwise ineligible claim into an eligible one. For the same reason, claims reciting incidental physical

Art Unit: 3695

transformations also may not pass muster under section 101. To permit such a practice would exalt form over substance and permit claim drafters to file the sort of process claims not contemplated by the case law.

In *Benson*, the Court reviewed the facts of several of its precedents dealing with process patents before drawing the conclusion that "transformation" is the clue to patent-eligibility "of a process claim that does not include particular machines." *Benson*, 409 U.S. at 68-71 (emphasis added). The cases *Corning* (tanning and dyeing), *Cochrane* (manufacturing flour), *Tilghman v. Proctor*, 102 U.S. 707 (1880) (manufacturing fat acids), and *Expanded Metal Co. v. Bradford*, 214 U.S. 366 (1909) (expanding metal), can all fairly be read to involve transformation of some article or material to a different state or thing. *Id.* at 69-70. *Benson* also compared *O'Reilly v. Morse*, 56 U.S. (15 How.) 62 (1854), to *The Telephone Cases*, 126 U.S. 1 (1888), reasoning that Morse's eighth claim was disallowed because it failed to recite any machinery for carrying out the printing of characters at a distance, instead simply claiming the use of "electromagnetism, however developed" for that purpose. *Id.* at 68. In contrast, Bell's claim in *The Telephone Cases* recited certain specified conditions for using a particular circuit for the transmission of sounds. *Benson*, 409 U.S. at 68-69.

These cases illustrate process claims where the recited machines played a central role in generating a useful result. In direct contrast, human-driven methods that merely recite a device that is insignificant to accomplishing the method (like the claim in *Grams*) and do not transform any article should not be recognized as a "process" claim similar to the above-cited cases. See *Diehr*, 450 U.S. at 191-92 ("insignificant post-solution activity will not transform an unpatentable principle into a patentable process").

Art Unit: 3695

In the case of claim 9 of the instant application, the critical steps of “determining the total numbers of years in the preselected time period; inputting initial and periodic contributions and fund allocations for the plurality of funds; generating a projection random number starting point for an initial year in the preselected time period; completing a projection method parameters file in which various parameters are identified, including a standard deviation of return for the plurality of funds, an average yield for the plurality of funds, and a probability that the average yield for the plurality of funds will exceed a projected yield in any year; generating a random number starting point for a subsequent year in the preselected time period based upon the random number starting point for the initial year” are interpreted to be performed by a human (See discussion of 112, second paragraph rejection above). The processor does not play a central role in generating a useful result. Nominal or token recitations of structure in a method claim should not convert an otherwise ineligible claim into an eligible one. Hence the recited method of claims 9-11, 13-20, 22-23, 45 and 46 does not qualify as a process under 35 USC 101. (See also *Ex Parte Langemyr*, Appeal 2008-1495, BPAI Decision May 28, 2008).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 3695

7. Claims 9-11, 13-18, 22-23, 45, 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wolfberg et al. (US Patent 5,214,579) in view of Edesess (US Patent 5,884,287).

Claim 9, Wolfberg teaches a computer-implemented method for projecting an accumulated investment amount for a portfolio having a plurality of funds over a preselected time period, comprising the steps of: determining the total numbers of years in the preselected time period (See the entire disclosure of Wolfberg especially Column 4 line 66 – Column 5 line 2); inputting initial and periodic contributions and fund allocations for the plurality of funds (See the entire disclosure of Wolfberg especially Column 1 lines 55-60); automatically calculating, by a computer, the time needed to process a projection of the accumulated investment amount for the portfolio having the plurality of funds (See the entire disclosure of Wolfberg especially Column 1 lines 60-67); automatically performing, by said computer, a projection of the accumulated investment amount for the portfolio having the plurality of funds (See the entire disclosure of Wolfberg especially Column 1 lines 60-67).

Wolfberg does not explicitly teach the steps of generating a projection random number starting point for an initial year in the preselected time period; generating a random number starting point for a subsequent year in the preselected time period based upon the random number starting point for the initial year; completing a projection method parameters file in which various parameters are identified, including a standard deviation of return for the plurality of funds, an average yield for the plurality of funds, and a probability that the average yield for the plurality of funds will exceed a projected yield in any year.

Art Unit: 3695

Edesess discloses the feature completing a projection method parameters file in which various parameters are identified, including a standard deviation of return for the plurality of funds, an average yield for the plurality of funds, and a probability that the average yield for the plurality of funds will exceed a projected yield in any year (See the entire disclosure of Edesess especially abstract, Figures 2-6, Column 1 lines 40-52).

It would have been obvious to one of ordinary skill in the art at the time of invention to include the teachings of Edesess to the disclosure of Wolfberg to create an optimal investment plan given wealth goals stated in probabilistic form. An investor can then see the overall risk related to overall return across an entire distribution.

Official notice is taken that generating a projection random number starting point and generating another random number starting point based upon the random number starting point is old and well known in the art of simulation/modeling. This ensures that the logic of the simulation/modeling is maintained. For instance ensuring that the initial year is before the final year when one is projecting values into the future.

It would have been obvious to one of ordinary skill in the art at the time of invention to include these steps to the disclosure of Wolfberg. An user can then ensure that the assumptions and logic of the simulation/modeling is maintained.

Claims 10-11, Official notice is taken that funds comprising select funds and variable annuities are old and well known. These investments help in diversification of risk and in matching the return objectives of investors. It would have been obvious to someone skilled in the ordinary art to include these features to the invention of Wolfberg because they help in diversification of risk and in matching the return objectives of investors.

Art Unit: 3695

Claim 13, Wolfberg discloses the feature that if the user interrupts the step of automatically performing a projection of the accumulation amount for the plurality of funds, automatically presenting completed projections (See the entire disclosure of Wolfberg especially Column 1 lines 60-67 and Column 9 lines 26-30).

Claim 14, Wolfberg discloses the step of automatically prompting the user prior to performing the step of automatically calculating a projection completion time. In the Wolfberg disclosure, the user is prompted to validate his or her identity before performing any requested services. In this way the system is protected against possible fraudulent use.

Claim 15, Edesess discloses inputting the average yield for each of the plurality of funds; automatically deducting a service charge; and automatically calculating the average projected yield for each of the plurality of funds (See the entire disclosure of Edesess especially Column 5 lines 37-45).

Claim 16, Edesess discloses the steps of: inputting data for the projection (See the entire disclosure of Edesess especially Column 5 lines 15-22); automatically performing a distribution model (See the entire disclosure of Edesess especially Column 2 lines 31-40).

Claim 17, Edesess discloses the step of automatically performing a projection of the accumulation amount for the plurality of funds further comprising the steps of: inputting data for the projection (See the entire disclosure of Edesess especially Column 5 lines 15-22). While Edesess does not explicitly disclose setting a yield equal to the index performance for a predetermined number of simulations, this step would be obvious to someone skilled in the ordinary art. The reason an investor would use a system such as this would be with the goals of receiving a higher yield on their money than the standard index. If the user was looking to

Art Unit: 3695

achieve were the yield of the index, then they would not need this system but rather would simply invest their assets evenly across the board. The higher yield is what would motivate them to use an investment management system. Automatically performing a distribution model for the number of simulations greater than the predetermined number would increase the investor's confidence in the results of the simulation.

Claim 18, Edesess discloses the steps of: inputting an average annual return on each investment and a standard deviation for the average annual return; automatically performing a normal distribution random projection of annual return; automatically deducting a predetermined percentage of annual yield from the projection of annual return; automatically performing a distribution model to generate multiple accumulation amounts (See the entire disclosure of Edesess).

Claim 22, the feature wherein the random distribution simulation includes a Monte Carlo simulation is old and well known. This simulation is useful generating values for investment projections based on values of the input variables.

Claim 23, Wolfberg in view of Edesess disclose the claimed method 18 as previously stated. While the references do not explicitly disclose wherein the plurality of funds includes at least one index fund, it was well known in the art at the time of invention to use index funds as investment vehicles. Therefore it would have been obvious to someone skilled in the ordinary art at the time of invention to use an index fund, because they provide instant diversification of a portfolio, and provide a good basis for comparison because they are designed to track the movement of particular indices (i.e. S&P 500 index funds).

Art Unit: 3695

Claims 45 and 46, Wolfberg discloses automatically determining the accumulated investment amount for the pre selected time period. The references do not explicitly disclose discounting the accumulated investment amount by a reserve interest rate and using a reserve investment rate or determining a present value of a future guarantee charge for the accumulate investment amount. However it was well known to anyone skilled in the ordinary art that both discounting an investment using an interest rate or reserve investment rate and finding the present value of a future value were common practices in the financial community. An investment manager would be motivated to discount the accumulated investment amount by certain factors to get a better understanding of the current market value of the investment as opposed to the redemption value (guaranteed amount). In the same manner, taking the present value of known future charges allows these charges to be factored into the present accumulation amount to get a better understanding of the "real" value of the current investment and helps to determine how much money needs to be invested currently to achieve the desired future value (guaranteed amount).

8. Claims 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wolfberg et al. (US Patent 5,214,579) in view of Edesess (US Patent 5,884,287) and further in view of Lane et al. Reference.

Claims 19 and 20, Wolfberg in view of Edesess teach the claimed method 9 as stated previously. Lane discloses inputting a number of scenarios and number of simulations (See Lane Page 107, lines 10-15); automatically generating a random number for a first simulation (See Lane Page 103, lines 12-17; inputting projection method factors (See Lane Page 107, lines 17-23); automatically generating a first simulation result for a random distribution model (See Lane

Art Unit: 3695

Page 104, lines 1-5); automatically generating a new random number from the first random number (See Lane Page 104, lines 5-13); automatically generating a new simulation result for the random distribution model (See Lane Page 104, lines 5-13).

While Lane does not explicitly disclose automatically repeating steps e (automatically generating a new random number) and f (automatically generating a new simulation) a number of times equal to the number of simulations inputted less two simulations, official notice is taken that it was well known in the art at the time of invention to run a simulation a number of times and that the number of times can be set by the operator. Therefore it would have been obvious to someone skilled in the ordinary art at the time of invention to run the Lane simulation multiple times, in order to compare the risks of investment decisions.

Lane also discloses automatically imputing the output of step g as the average yield for each of a plurality of funds (See Lane Page 105, Table 2); automatically calculating the average projected yield for each of the plurality of funds (See Lane Page 106, Table 3, Forecast Yields); automatically generating a first simulation result for the random distribution model for a new simulation (See Lane Page 103, lines 12-17) and; automatically repeating steps e through j a number of times equal to the number of scenarios inputted less one scenario to produce outcomes for each of the plurality of scenarios (See Lane Page 105-106, Tables 2 and 3).

Response to Arguments

9. In support of the official notice taken that “generating a projection random number starting point and generating another random number starting point based upon the random number starting point is old and well known in the art of simulation/modeling”, the Examiner

Art Unit: 3695

hereby presents the Sato reference (US Patent 4,689,606) (See the entire disclosure of Sato especially Abstract, Column 3 lines 13-35, Column 4 lines 30-67, Claim 1).

In support of the official notice taken that “funds comprising select funds and variable annuities are old and well known”, the Examiner hereby presents the Melnikoff reference (US Patent 5,784,696) (See the entire disclosure of Melnikoff especially Column 7 lines 26-54).

In support of the official notice taken that “the random distribution simulation includes a Monte Carlo simulation is old and well known”, the Examiner hereby presents the Giansante et al reference (US Patent 6,275,814) (See the entire disclosure of Giansante especially Column 3 line 35 – Column 4 line 62).

In response to Applicant’s assertion “The subject matter claimed in claim 9 is described in applicant's specification in at least page 18, line 26 - page 22, line 9, which describes the "method for determining the projected accumulation amount using Select Funds." (See specification as filed, page 18, lines 26-27.)”, the Examiner respectfully disagrees. This assertion does not cure the deficiencies in the claim. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant's other arguments with respect to pending claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure are listed on the attached form PTO-892.

Art Unit: 3695

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Narayanswamy Subramanian whose telephone number is (571) 272-6751. The examiner can normally be reached Monday-Thursday from 8:30 AM to 7:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles R. Kyle can be reached at (571) 272-6746. The fax number for Formal or Official faxes and Draft to the Patent Office is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PMR or Public PAIR. Status information for unpublished applications is available through Private PMR only. For more information about the PMR

Art Unit: 3695

system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Narayanswamy Subramanian/

Primary Examiner

Art Unit 3695

July 1, 2009